

JP 916657

H07-268300

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2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] This invention relates to the camera print system by which the camera in which data transmission is possible, and the printing equipment which receives and prints the data were set.

[0002]

[Description of the Prior Art] Conventionally, JP,5-167965,A has the indication of the following purports, concerning an electronic camera with a transmitting function, and a recording device with a reception function. After taking a photograph with the electronic camera which has a transmitting function, it becomes unnecessary to memorize a lot of image data in an electronic camera, and the technique in which it is not necessary to carry the storage of a big capacity in this electronic camera is indicated by transmitting to the recording apparatus in the location which left the image data obtained by photography.

[0003]

[Problem(s) to be Solved by the Invention] However, with the technique indicated by above-mentioned JP,5-167965,A, the technique to print was not indicated, after transmitting the photoed image data to a recording device. Therefore, in order to print image data, the expensive printer was purchased and printed by itself, or data were once recorded on media, such as a floppy disk, and with these media, it needed to go and needed to print on the digital lab service currently offered in the DPE store etc.

[0004] Then, this invention is made in view of the above-mentioned technical problem, and aims at offering the camera print system which can create to timely printing [which a photography person wishes] by transmitting the image data and identification information which were picturized with the camera with a transmitting function to the printing equipment in a remote place.

[0005]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the camera print system of this invention An ID input means to input the user ID information which is identification information, and an image pick-up means to change the photoed image into digital data, A data compression means to compress the above-mentioned digital data, and the sending-signal means forming which changes into the signal for transmission the above-mentioned user ID information and the digital data of an image by which compression was carried out [above-mentioned], The camera with a transmitting function which has a transmitting means to transmit the above-mentioned signal for transmission, A receiving means to receive the signal for transmission by which transmission was carried out [above-mentioned], and a storage means to distinguish user ID information from the signal which this receiving means received, and to memorize image data corresponding to user ID information, A print initiation judging means to judge whether the print of the above-mentioned image data memorized by this storage means is started, When it judges with print initiation with the above-mentioned print initiation judging means, it is characterized by consisting of a printing equipment with a reception function which has a print means to print the above-mentioned image data.

[0006] Furthermore, the camera print system of this invention is characterized by the above-mentioned user ID information that it is inputted by the above-mentioned ID input means being the

information currently recorded on the memory card.

[0007] Furthermore, the camera print system of this invention will carry out carrying out a printed output in the image data memorized by the above-mentioned storage means as the description, if it has a print directions means by which the above-mentioned camera with a transmitting function transmits the print request code which directs a print and the above-mentioned printing equipment with a reception function receives the above-mentioned print request code.

[0008] That is, with the camera with a transmitting function in the camera print system of this invention, the image which the user ID information which is identification information was inputted with ID input means, and photoed is changed into digital data by the image pick-up means, and the above-mentioned digital data is compressed by the data compression means. And the above-mentioned user ID information and the digital data of an image by which compression was carried out [above-mentioned] are changed into the signal for transmission by sending-signal means forming, and the above-mentioned signal for transmission is transmitted by the transmitting means.

[0009] Furthermore, in a printing equipment with a reception function, while user ID information is distinguished from the signal which the signal for transmission by which transmission was carried out [above-mentioned] was received with the receiving means, and this receiving means received with the storage means, image data is memorized corresponding to user ID information. And when it is judged by the print initiation judging means whether the print of the above-mentioned image data memorized by this storage means is started and it is judged by the above-mentioned print initiation judging means to be print initiation, the above-mentioned image data is printed by the print means.

[0010]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained with reference to a drawing. First, in order to make an understanding of this invention easy, the concept of the camera print system concerning this invention is explained.

[0011] Drawing 1 is the block diagram showing the notional configuration of the camera print system concerning this invention. This camera print system consists of a camera 1 which is image pick-up equipment which has a transmitting function, and a printing equipment 2 which has the reception function to receive the information transmitted from this camera 1.

[0012] Furthermore, the above-mentioned camera 1 consists of the sending-signal formation section 16 which changes into the signal for transmission the image pick-up section 10 which photos a photographic subject and changes that image into digital image data, the data compression section 12 which compresses this image data, ID input section 14 which inputs user-ID information, and the above-mentioned user-ID information and the compressed image data, and the transmitting section 18 which transmits the above-mentioned signal for transmission.

[0013] The above-mentioned printing equipment 2 becomes from the receive section 20 which receives the signal for transmission transmitted from the above-mentioned camera 1, ID distinction section 22 which distinguishes the above-mentioned user-ID information, the storage section 24 which memorizes image data for every user-ID information, the print initiation judging section 26 which judges whether a print is started or not, and the print section 28 print the above-mentioned image data by directions of this print initiation judging section 26.

[0014] Thus, in the constituted camera print system, the picturized image is sent to immediate printing equipment 2, and is automatically printed by print initiation judging. For this reason, a photography person can drop in at the DPE store near the house which has a printing equipment 2 in the middle of going home etc., and can receive the photograph taken for the travel.

[0015] Next, the camera print system of the gestalt of operation concerning this invention is explained. Drawing 2 is the concrete image Fig. showing the camera print structure of a system of the gestalt of operation.

[0016] As for the camera 1 which is image pick-up equipment, a modem and telephone are built in an electronic camera. The image data photoed with the camera 1 is sent to the nearby reception point 30 with telephone systems, such as a PHS method, it connects with the access points 32, such as personal computer communications, from there, and data are sent. In an access point 32, the received user ID code and a transmission place ID code (ID codes, such as a DPE store) are checked, and the above-mentioned data are filed according to a transmission place ID code by the database 34.

[0017] If it usually connects by LAN, this DPE store 36 sucks up data for every above-mentioned

user ID code and the DPE store 36 which owns a database 34 and a printing equipment has a print initiation judging, it will start creation of a print 38.

[0018] In addition, the transmitting method of the above-mentioned data may use not only a PHS method but other methods. Even if the above-mentioned database 34 is not a thing at the time of personal computer communications, it may use the exclusive database of a print system. The above-mentioned DPE store may be in a convenience store, a supermarket, etc. Moreover, Above LAN may be the telephone line, a cable television circuit, etc.

[0019] Drawing 3 is drawing showing the configuration of the above-mentioned camera 1. In the control section 40 which consists of a RISC mold microcomputer etc. and controls actuation of the camera 1 whole The image pick-up section 10 which changes into digital image data the photographic subject image by which image formation was carried out with the lens 42, The image memory 44 which are the buffer memory when carrying out the primary storage of the above-mentioned image data, and carrying out the data compression of the above-mentioned image data, and the memory location of compressed data, The condition of the camera 1 which the image created from the above-mentioned image data displays and mentions later, and the display 46 which displays warning etc., ID input section 14 which inputs the user ID mentioned later, the nonvolatile memory 48 which consists of an EEPROM, a flash memory, etc. and memorizes the number of photography pieces etc., and the transmitting section 18 which has a modem function, a telephone function, etc. and performs data transmission are connected.

[0020] Furthermore, the power switch (it is described as Following PWSW) 50 for making actuation of this camera 1 start, the release switch (it is described as Following RSW) 52 for making photography start, and the print directions switch (it is described as Following PSW) 54 for transmitting print initiation to a printing equipment 2 are connected to the above-mentioned control section 40.

[0021] In addition, it may not necessarily be restricted to this, and as long as speed is early, other CISC mold microcomputers are sufficient as it, although the above-mentioned control section 40 consists of a RISC mold microcomputer. In a mass case, the above-mentioned nonvolatile memory 48 may memorize the compressed data of the above-mentioned image data, and data are held even if it turns off a camera 1 in this case.

[0022] Moreover, the above-mentioned transmitting section 18 does not have a modem function and a telephone function, but makes these a camera 1 and another object, and you may make it connect them to a camera 1. Furthermore, a modem function and a telephone function may be built in a control section 40.

[0023] Drawing 4 is drawing having shown the example which performs the user ID information input to the above-mentioned ID input section 14 with an ID card. By inserting in ID input section 14 of a camera 1 ID card 58 which has a contact 56, it becomes ready-for-sending ability to a printing equipment 2 about the user ID information memorized by ID card 58 which is mentioned later.

[0024] ID card 58 is passed to a photography person when it contracts with the DPE store which owns a printing equipment 2. This ID card 58 contains a flash memory, EEPROM, etc. The contents of the user ID information memorized by ID card 58 For example, the user ID code for identifying a photography person as shows drawing 10 mentioned later, The user pass code for checking whether you are him, when data have been sent, A DPE store is a chain store, and in order to investigate [the DPE store ID code which shows the contract stores in the case of being all over the country etc. (usually store near its own house), and] whether there is any error in those data further, it consists of check codes, such as CRC and a parity code, etc.

[0025] In addition, it is good to use absolutely the number which is not registered into a duplex, for example, the telephone number etc., as the above-mentioned user ID code. Next, actuation of the above-mentioned camera 1 is explained.

[0026] Drawing 5 is a flow chart which shows processing of the control section 40 as actuation of the above-mentioned camera 1. If the power switch (PWSW) 50 is turned on, a control section 40 will judge first whether the user ID code is set (step S1). When the user ID code is not set, since data transmission cannot be performed, it displays "he has no ID code" on a display 46 (step S2), and judges whether PWSW50 is off (step S11). Here, this processing is ended when PWSW50 is off. On

omitted.

[0038] Drawing 8 is drawing having shown the example which transmits the user ID information input to the above-mentioned ID input section 14 with telephone. By transmitting to ID input section 14 of a camera 1 from telephone 64, user ID information is set up and it becomes ready-for-sending ability to a printing equipment 2. This user ID information is the same as that of the contents of the data memorized by ID card 58 mentioned above, and that explanation is omitted.

[0039] Drawing 9 is a flow chart which shows processing of the control section 40 when setting up user ID information in another example of the configuration of the camera 1 shown in drawing 6. ON of a mode switch (municipal solid waste) 60 starts this flow chart by interruption. First, it indicates that the control section 40 became ID input mode at the display 46 (step S21).

[0040] Next, a control section 40 judges whether the data input of user ID information was started (step S22). When data are not inputted, it judges whether PWSW50 is off (step S23). Here, when PWSW50 is not off, it stands by until return and data are inputted into step S22. On the other hand, this processing is ended when PWSW50 is off.

[0041] Moreover, when the data input of user ID information is started at the above-mentioned step S22, a control section 40 incorporates user ID information (step S24), and performs data check by the check code shown in drawing 10 (step S25). When a check result is normal, "a data input success" is displayed on a display 46 (step S26), and when a check result is not normal, on the other hand, "data input failure" is displayed on a display 46 (step S27). Then, this processing is ended.

[0042] Next, the printing equipment 2 in the camera print system of the gestalt of operation is explained. Drawing 11 is the block diagram showing the configuration of the above-mentioned printing equipment 2.

[0043] In the print control section 70 which controls actuation of this whole printing equipment 2 The modem 74 which changes into digital data the data which came from the communication line 72, The image storage section 76 which memorizes the image data which received, and the user ID storage section 78 data as shown in drawing 12 mentioned later are remembered to be, The image printer 80 which prints an image from the image data memorized by the image storage section 76, and the media write-in section 82 which performs the writing to media are connected.

[0044] Drawing 12 is drawing showing the data memorized by the above-mentioned user ID storage section 78. The data memorized are whether he wishes a media output as a hope of the user pass code for checking whether you are him, and other photography persons, and whether to wish further coincidence print number of sheets and mailing of the result printed [eye / the print form class, for example, a paper size, / **** / gloss/] further, when the user ID code for identifying a photography person and data have been sent.

[0045] **** of the above-mentioned user ID code is good so that it will be registered if it contracts with the DPE store which owns printer equipment 2, and service of this invention can be received. The media write-in section 82 writes in media, when expected of media writing (i.e., when set as those with a media output). These media show the floppy disk (FD) for memorizing image data, a mini disc (MD) and a magneto-optic disk (MO), photo CD, etc.

[0046] Drawing 13 is a flow chart which shows processing of the print control section 70 as actuation of the above-mentioned printing equipment 2. First, the print control section 70 judges whether communication link start time came (step S31). Here, when communication link start time comes, it communicates with a database 34. in addition, the above-mentioned communication link start time -- usually -- one day -- several times -- periodical -- ** -- it shall shift and a communication link shall be then performed As other methods of making a communication link start, when the amount of data is accumulated more than a constant rate, and when a print request code is sent, this equipment may be started from a database 34 side.

[0047] Next, it judges whether the print control section 70 has image data and data of user ID information in a database 34 by communication link (step S32). When there are data, it is confirmed whether the print control section 70 reads the data (step S33), and the user ID code and its user pass code correspond (step S34). And when the user ID code and the user pass code are in agreement, the image data compressed according to the user ID code is memorized in the image storage section 76 (step S35).

[0048] Then, it judges whether the print control section 70 read the print request code (step S36).

When a print request code is read, printing-yet data are elongated and (step S37) printed from the image data memorized [be / it / under / image storage section 76 / setting] by the user ID code of the photography person corresponding to a print request code (step S38), and it shifts to step S39. On the other hand, when a print request code is not read, this processing is ended as it is.

[0049] At the above-mentioned step S39, it judges whether there is any hope of a media output.

When there is hope of a media output, compressed data is written in media (step S40). And finally a user request matter (contents at the time of a contract) is outputted to a label (step S41), and this processing is ended.

[0050] Moreover, at the above-mentioned step S31, when it is not communication link start time, when there are no data in a database 34 at the above-mentioned step S32, and when the user ID code and the user pass code are not in agreement with the above-mentioned step S34, when there is no hope of a media output at the above-mentioned step S39, this processing is ended further, similarly.

[0051] In addition, the DPE store which owns this printing equipment 2 can usually read only the data of its DPE store ID code. Moreover, the print in the above-mentioned step S38 shall be performed by accompanying the specification decided for the time of a user and a contract.

[0052] Moreover, what is necessary is to add the code of the purport of output hope to the transmit data of the above-mentioned picture and just to transmit to it to carry out the expansion print only of the one picture which carried out the image processing from the personal computer of a house etc. apart from the data memorized by the user ID storage section 78. At this time, if priority is given to the transmitted data to the data memorized by the user ID storage section 78 and they are processed, it will be satisfactory.

[0053] Drawing 14 is drawing showing the example of an output of the label in the above-mentioned step S41. It finishes and this label 90 records a customer's name, the telephone number, the address, the outputted media, coincidence print number of sheets, size, the approach of receiving, etc. The round mark in drawing shows that the item is chosen among some alternative.

[0054] What was outputted is easily manageable by putting into a bag a print, media, etc. to which image data and a user ID code were outputted, and sticking the above-mentioned label 90.

[0055] Drawing 15 is a flow chart which shows processing of the print control section 70 as actuation of example of another of the above-mentioned printing equipment 2. This shows a means to make a print start, when there is no function to transmit a print request code to a camera 1 side.

[0056] First, the print control section 70 judges whether communication link start time came (step S51). Here, when communication link start time comes, it communicates with a database 34. in addition, the above-mentioned communication link start time -- usually -- one day -- several times -- periodical -- ** -- it shall shift and a communication link shall be then performed As other methods of making a communication link start, when the amount of data is accumulated more than a constant rate, and when a print request code is sent, this equipment may be started from a database 34 side.

[0057] Next, it judges whether the print control section 70 has image data and data of user ID information in a database 34 by communication link (step S52). When there are data, it is confirmed whether the print control section 70 reads the data (step S53), and the user ID code and its user pass code correspond (step S54). And when the user ID code and the user pass code are in agreement, the image data compressed according to the user ID code is memorized in the image storage section 76 (step S55). When this storage is performed, the time at this time is memorized in the image storage section 76 for every user ID code by the clock function in which it does not illustrate [which was built in the printing equipment 2] (step S56). Then, this processing is ended.

[0058] Moreover, at the above-mentioned step S52, when there are not image data and data of user ID information in a database 34, it judges whether the print control section 70 has the image data which carried out fixed time amount progress from the newest above-mentioned receiving time memorized for every user ID code (step S57). When there is image data which carried out fixed time amount progress, this image data is elongated and (step S58) printed (step S59).

[0059] Next, it judges whether the print control section 70 has the hope of a media output (step S60). When there is hope of a media output, compressed data is written in media (step S61). And finally a user request matter (contents at the time of a contract) is outputted to a label (step S62), and this processing is ended.

[0060] Moreover, at the above-mentioned step S51, when it is not communication link start time,

when the user ID code and the user pass code are not in agreement with the above-mentioned step S54, and when there is no image data which carried out fixed time amount progress at the above-mentioned step S57, when there is no hope of a media output, this processing is further, ended similarly by the above-mentioned step S60.

[0061] As explained above, according to the gestalt of this operation, a print request can be carried out even if it does not bring the photoed image data to a laboratory. In addition, according to the above-mentioned embodiment of this invention, the following solves and a configuration is obtained.

(1) An ID input means to input user ID information, and an image pick-up means to change the photoed image into digital data, A data compression means to compress the above-mentioned digital data, and the sending-signal means forming which changes into the signal for transmission the above-mentioned user ID information and the digital data of an image by which compression was carried out [above-mentioned], The camera with a transmitting function which has a transmitting means to transmit the above-mentioned signal for transmission, A receiving means to receive the signal for transmission by which transmission was carried out [above-mentioned], and a storage means to distinguish user ID information from the signal which this receiving means received, and to memorize image data corresponding to user ID information, A print initiation judging means to judge whether the print of the above-mentioned image data memorized by this storage means is started, the printing equipment with a reception function which has a print means to print the above-mentioned image data when it judges with print initiation with the above-mentioned print initiation judging means -- since -- the camera print system characterized by becoming.

(2) The above-mentioned user ID information that it was inputted by the above-mentioned ID input means is a camera print system given in the above (1) characterized by what it is inputted from an external device and memorized by nonvolatile memory.

(3) The user ID information inputted by the above-mentioned ID input means is a camera print system given in the above (1) characterized by what it is inputted from the external telephone line and memorized by nonvolatile memory.

(4) A camera print system given in the above (1) characterized by carrying out camera photography to prohibition when the user ID code for user identifications is not set to the user ID information inputted into the above-mentioned ID input means.

(5) When the above-mentioned camera with a transmitting function has a print directions means transmit the print request code which carries out print directions and the above-mentioned printing equipment receives the above-mentioned print request code, it is the camera print system of the publication by the above (1) carry out carrying out a printed output based on the above-mentioned print initiation judging means in the image data memorized by the above-mentioned storage means with the above-mentioned print means as the description.

(6) The above-mentioned print initiation means is a camera print system given in the above (1) characterized by starting a print with the above-mentioned print means when fixed time amount progress is carried out from the image data signal received at the end.

(7) The above-mentioned printing equipment is a camera print system given in the above (1) characterized by having a user ID storage means to memorize a user's item wishing a printed output, and making a print possible based on the contents.

(8) The above-mentioned item wishing a printed output is a camera print system given in the above (7) characterized by including at least one of print size, coincidence print number of sheets, the receipt approach of a print, the necessity of a media output, and output media classes.

(9) The class of the above-mentioned output media is FD, MD, MO, and a camera print system given in the above (8) characterized by including at least one of photo CD.

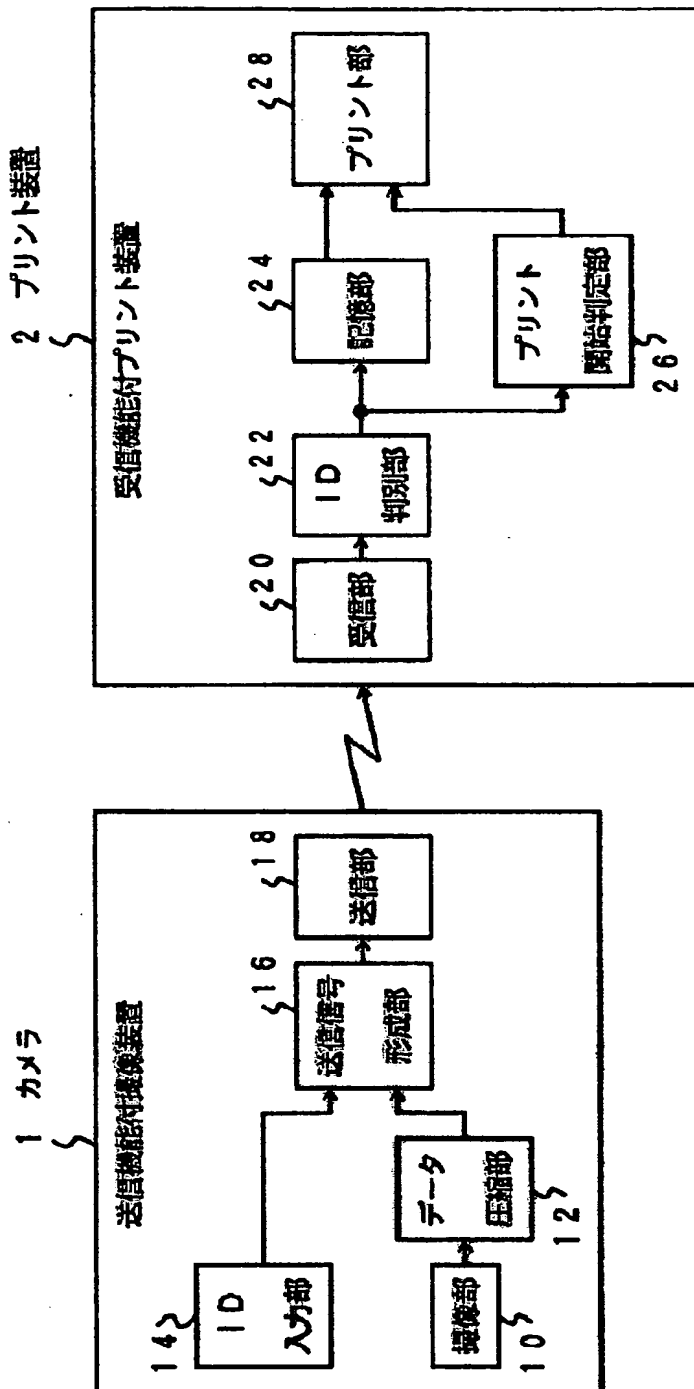
(10) The above-mentioned printing equipment is a camera print system given in the above (1) characterized by having the write-in means which writes image data in storage media.

[0062]

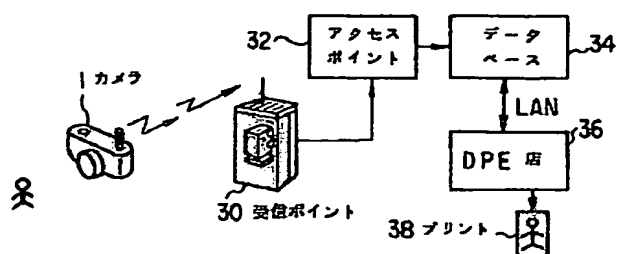
[Effect of the Invention] As stated above, according to this invention, it is possible to offer the camera print system which can create to timely to print [which a photography person wishes] by transmitting the image data and identification information which were picturized with the camera with a transmitting function to the printing equipment in a remote place.

[Translation done.]

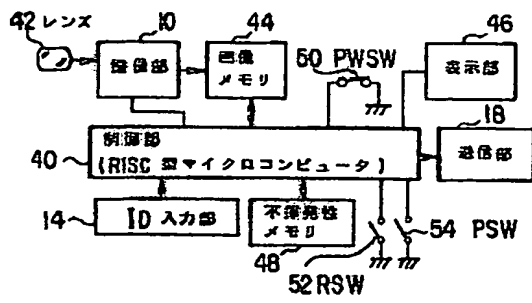
Drawing selection **drawing 1**



[Translation done.]

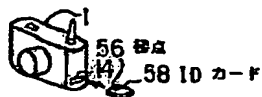
Drawing selection drawing 2

[Translation done.]

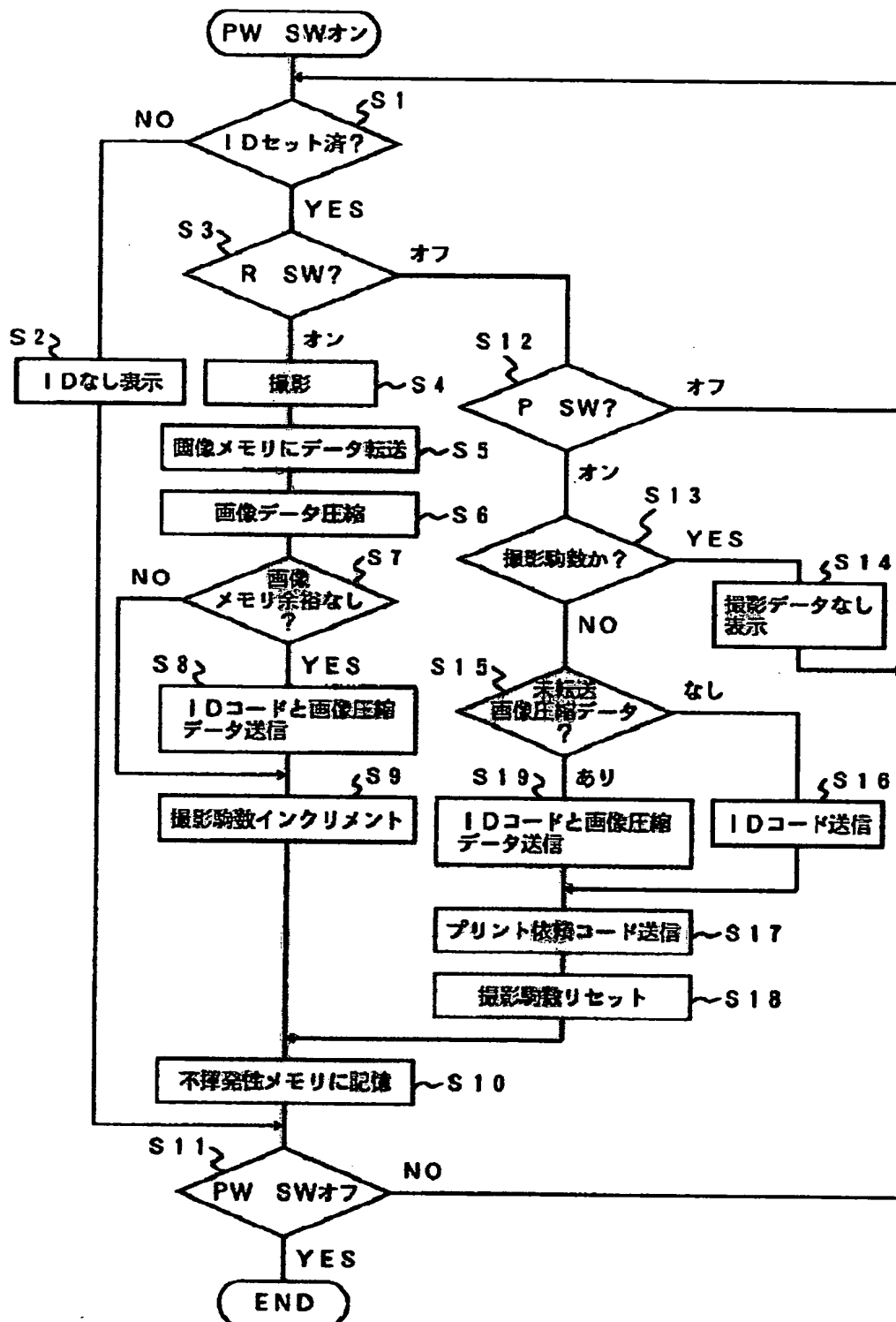
Drawing selection 

[Translation done.]

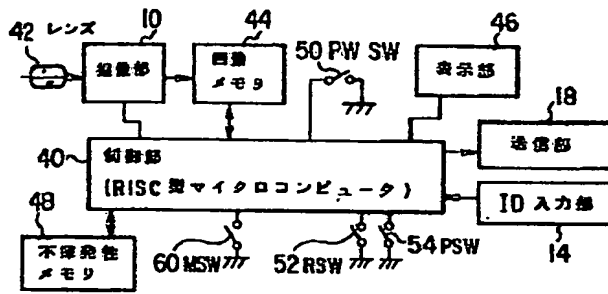
Drawing selection



[Translation done.]

Drawing selection 

[Translation done.]

Drawing selection drawing 6

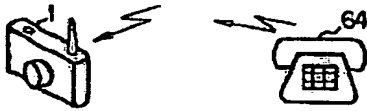
[Translation done.]

Drawing selection

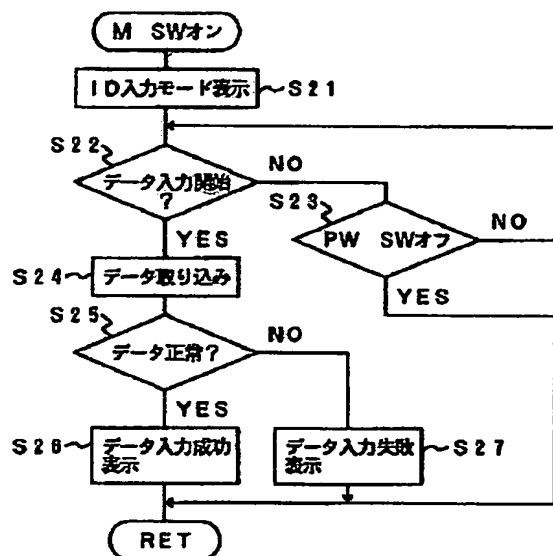


[Translation done.]

Drawing selection 



[Translation done.]

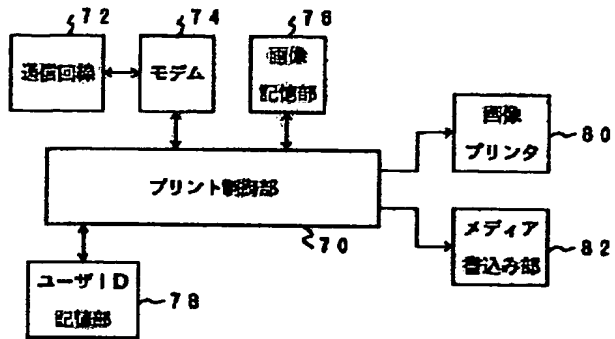
Drawing selection drawing 9

[Translation done.]

Drawing selection 

ユーザID	ユーザパス	DPE店ID	チェック
コード	コード	コード	コード

[Translation done.]

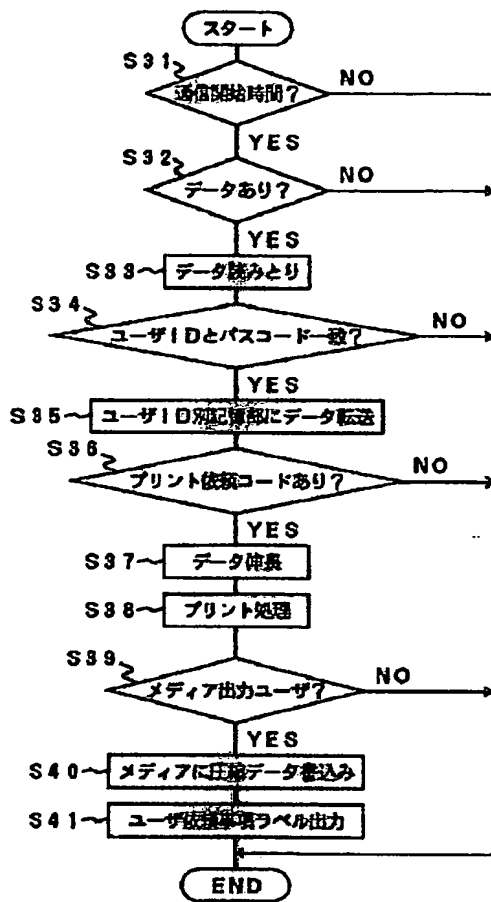
Drawing selection drawing 11

[Translation done.]

Drawing selection 

ユーザID
ユーザパスワード
メディア出力あり/なし
同時プリント枚数
プリント用紙種類
転送あり/なし

[Translation done.]

Drawing selection 

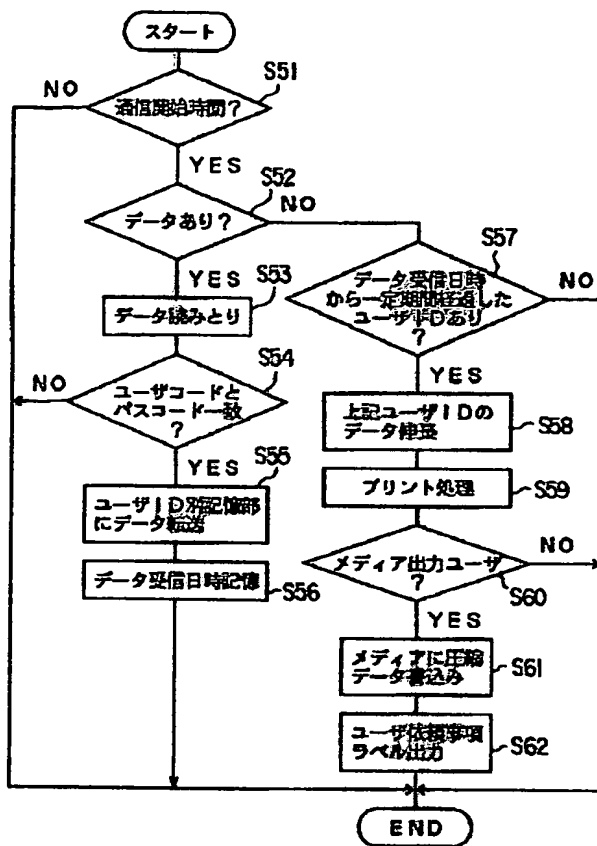
[Translation done.]

Drawing selection

90

お客様	xxxxxx
TEL	xx-xxxxx-xxxxx
住所	東京都xxxx x-x-x
メディア	<input checked="" type="radio"/> MD, MO, CD
同時プリント 枚数	0, <input checked="" type="radio"/> 2
サイズ	E, <input checked="" type="radio"/> 2L
仕上	<input checked="" type="radio"/> きぬ目
受けとり法	<input checked="" type="radio"/> 郵送

[Translation done.]

Drawing selection drawing 15

[Translation done.]